MISSOURI BOTANICAL GARDEN

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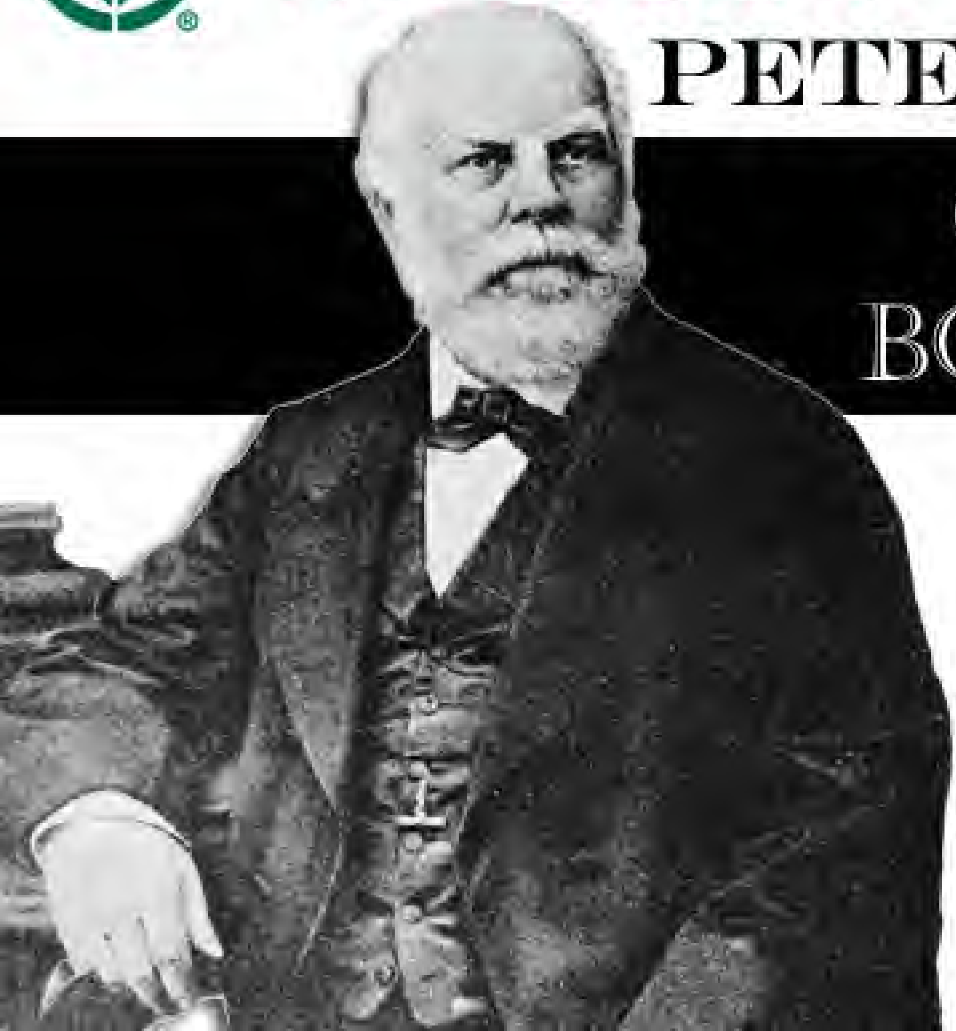
GEORGE ENGELMANN BOTANICAL NOTEBOOKS



Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Rec Aug 25 Brookline
Ans " 27

S. Parish
writes

San Bernardino Cal
Aug 13. 1882

Dear Dr. Engelmann:

Here is another package of plants we ~~would~~ will thank you to look over and report upon. We must have left out the bracts in the specimen of this Agave deserti we sent you; so we put some in this. We have a section of a ~~sc~~ flower scape, & when it dries so as not to be so heavy, we will send you a piece of it & you can see the size for yourself. We did not measure the leaves, but there are plenty at least twice the size of the specimens. The bracts are quite close together at the base of the scape, becoming smaller & more distant as the upper part is reached. We have never seen A. Shawii, but from the plate in your paper on Agaves they appear about the same at the lower part of the stem but less crowded than A. Shawii at the upper part. The color of the flowers is very well preserved in the specimens; when fresh they are perhaps a little lighter yellow. There seems to be no change in the color ~~while~~ as it becomes older.

8048

the nectiferous fluid is so abundant as to fall in a shower when the stem is shaken. You ask as to our method of preparing Agaves. We dip them in boiling water. The ~~secret~~ art is in not leaving them in the water, but just plunging them in a few seconds at a time, letting them cool a little & repeating until vitality is destroyed & the parts are softened. If left in long at a time the color is injured. Other things which break away from the stem, such as Bonguenia &c, are greatly improved by this process.

~~Your card about Juncus canaliculatus is at hand. We have not visited the original station this year, & unless our 1439, of this package, turns out to be that species, ~~than~~ it will probably have to go over till another season.~~

~~We had an opportunity of observing Cereus Mohavensis again & in greater abundance. The masses in which it grows most often number 300-1500~~

Copy of original notes of Agave Dr Parry Dec 1879

San Felipe June 18th 1850 (A. deserti Engel.

Agave – ? "Mezcal"

Fl stem 4–10 ft – 1–2 inch diameter near base – subtended by bracts deltoid acuminate above. becoming oblong and leaf like below. spirally arranged nodose swollen at their attachment to the stem. closely embracing it below their bases ne merging into the stem giving the cylindric stem a wavy appearance – lower leaves light green forming a dense cluster round the base of the stem spathulate oblong 6–8 inches long 2 inches broad spinose at tip, pointing up and more horizontal at bottom their edges set with sharp somewhat hooked backward teeth. upper bracts within one to two feet of the top having in their axils peduncles horizontally flattened. the middle ones the longest (2–3 inch) dividing at its extremity into close bundles of pedicels supporting a thick mass of yellow flowers on smooth green ovaries – the main peduncles spreading more horizontally below, more perpendicularly above. – flowers 6 petaled. every alternate one (outer) thickly nerved on the outside each bearing a stamen on a thickened disc on the inside. filaments horizontally thickened tapering upwards anthers 1/3 inch inserted at the middle, pistil white yellow. cylindric 3 knobbed at top one inch long equalling or exceeding the stamens 3 times the length of the perianth – Fruit 3 (rarely 4) celled dehiscent above seeds black shining &c

Root fibrous at the insertion of the leaves enclosing a thick fleshy mass 3 inches in diameter forming the edible part when cooked

Hab. dry hills & valleys about San Felipe. (on edge of desert) its crowded clusters of leaves covering patches 4–6 ft in diameter few having flower stalks at the same time

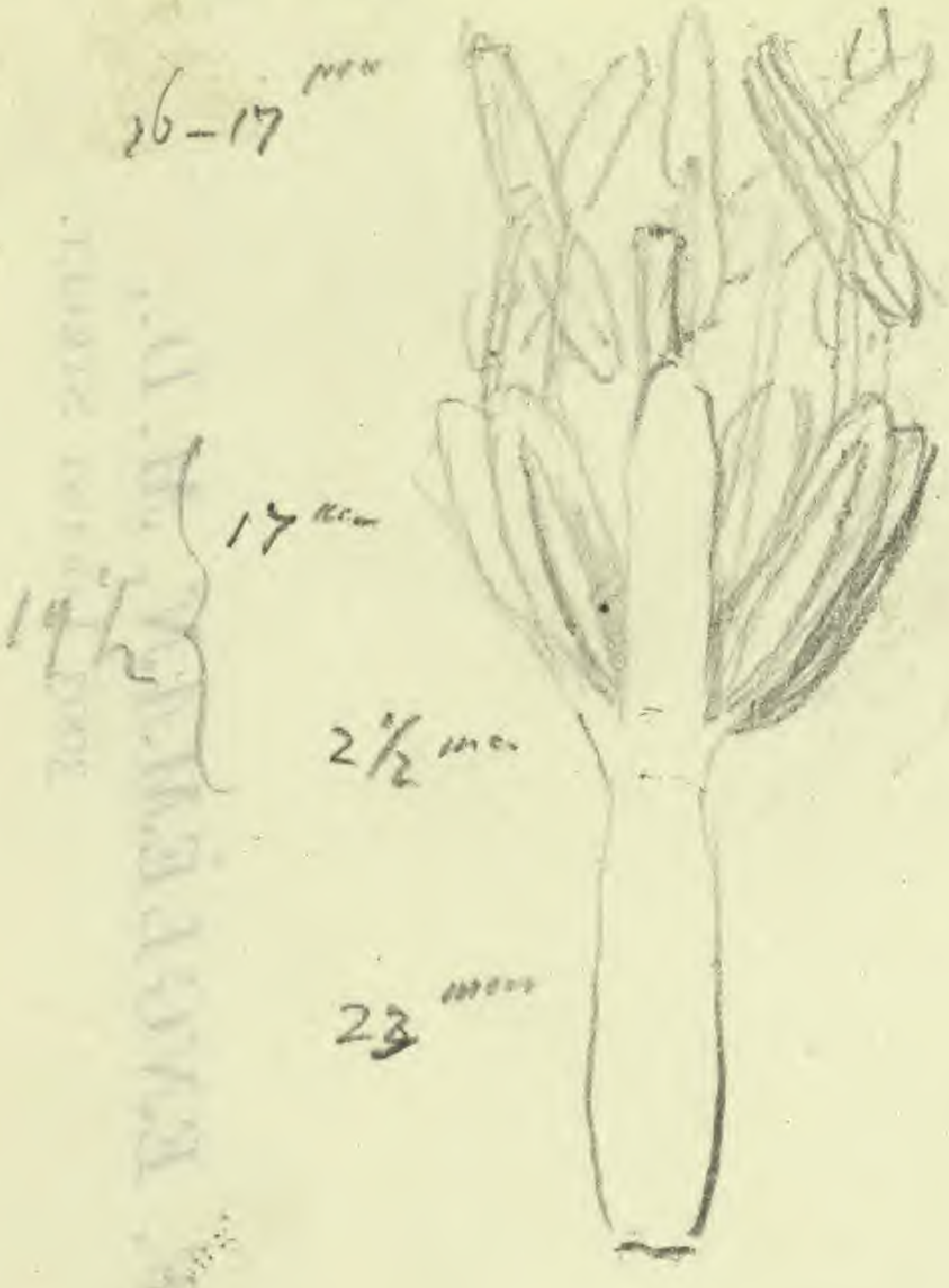
8049

Agave

July 27 1875

Vallecitos (Carrizo Creek ?)
maj: Emory Nov 29 1846
see Emory Report p. 104

(Ex Herb. Torrey)



Tube wide, very short (scarcely
2½ mm or over a line —
lobes about 7 times as long, 17 mm
anthers 16–17 mm long
Insertion of stamens at top of tube
faux
Ovary longer than free part of flower

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MISSOURI
BOTANICAL
GARDEN

R. C. HARRISON,
508 Leffingwell Avenue,
Druggist & Apothecary

8050

G. F. ENGLEMAN, M.D.,
3003 LOCUST STREET.

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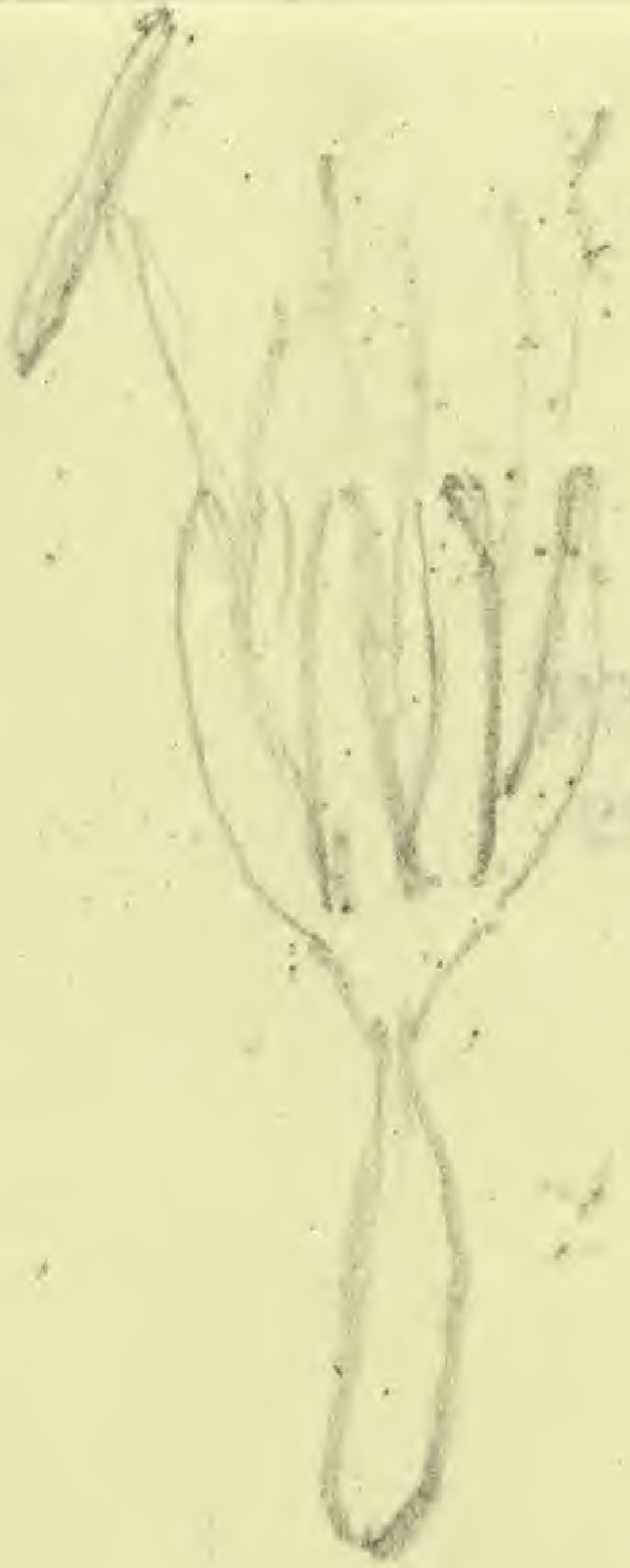

Jan 17 1875

Agave
villeritana, near San Felipe
Emory Nov 29 1846
see Emory Report p. 104

(from Herb Torrey)

Lobes of corolla many times longer
than short campanulate tube

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Dr Parry, Washington July 25 1871 writes

There is an Agave on East side of Sierra Nevada back of San Diego at San Felipe which I saw in flower in June 1849. It was used for Mezcal, did not grow very large, had large flowers, not very close together

George
LIB

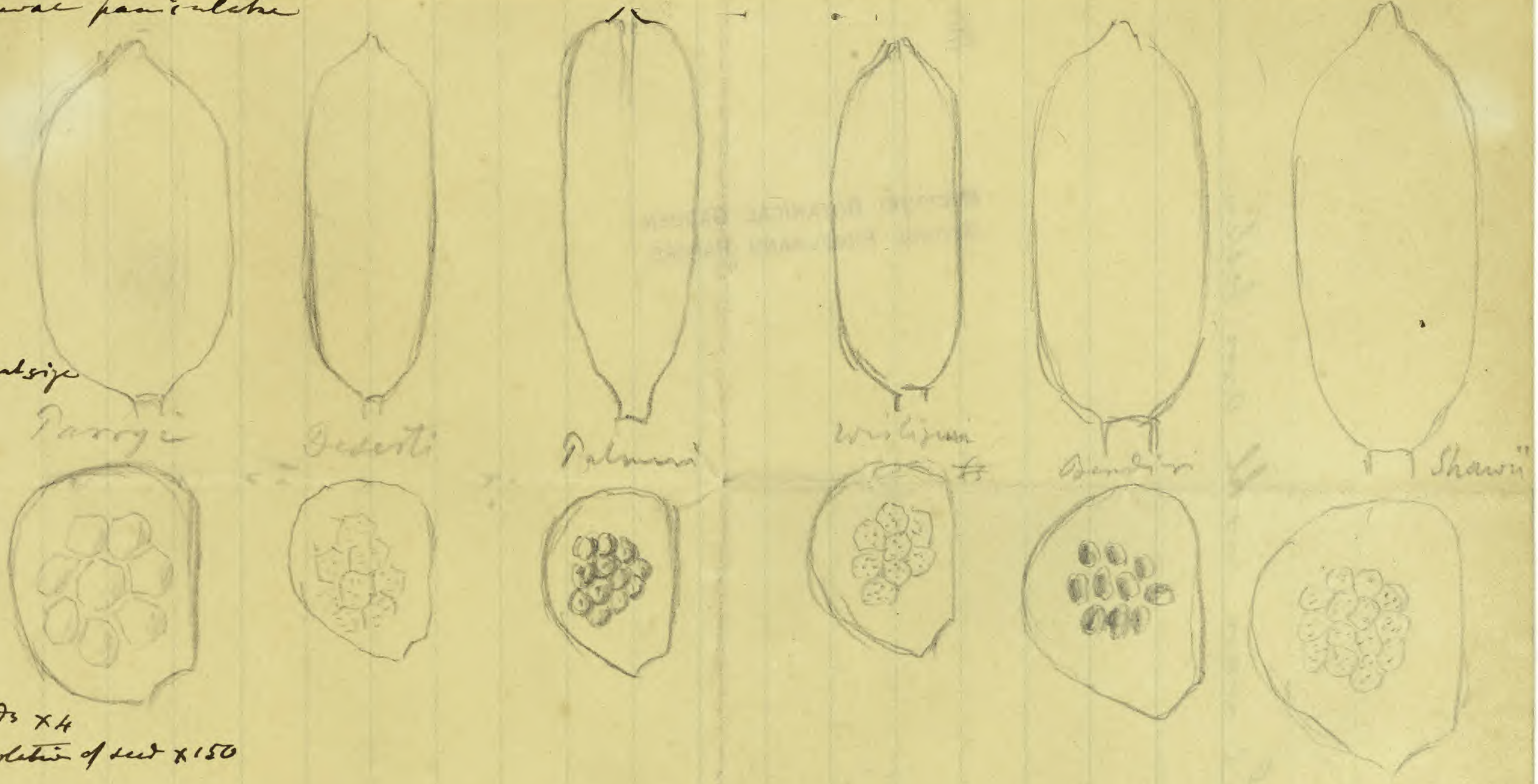
as a committee of one
to return such answer
as you may deem
most proper to M. Pre-
mier. The letter will explain
itself, I presume.

Yours truly

Nathaniel Holmes,
Cor. Sec.y

8052

Agave paniculata



Caps. nat. size

seeds ×4
areolation of seed ×150

Bandirii Palmeri y Deserti
Wislizeni

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Es wäre wohl am besten

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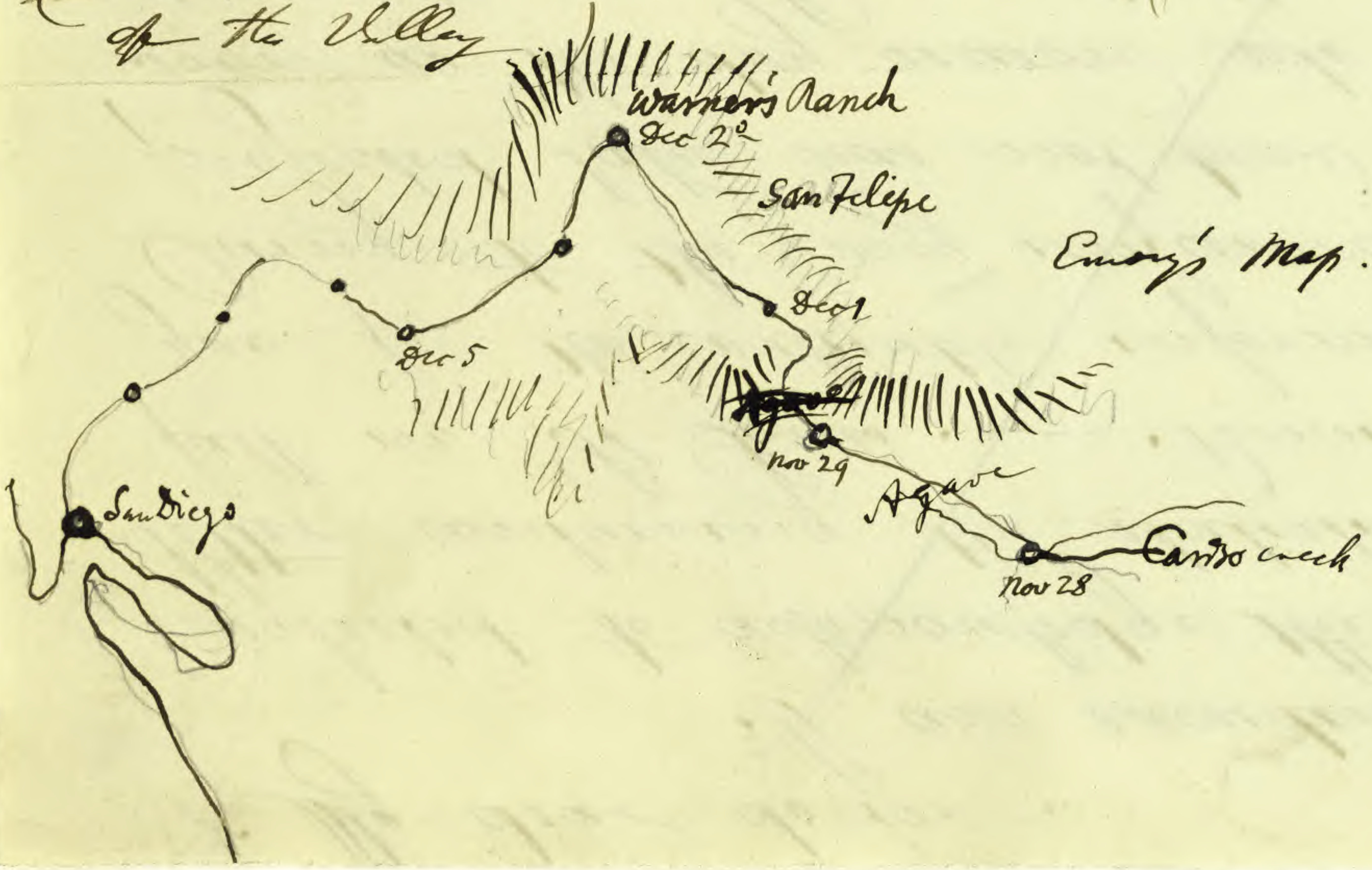
Maj. Emory's Notes of a Military Reconnoissance etc 1846-1847
Washington 1848 – Senate Document No 7.

pag 103. Nov 29 (1846) —

104 – – we rode for miles through thickets of the centennial plant, [Agave Americana] and found one in full bloom. The sharp thorns terminating every leaf of this plant, were a great annoyance to our dismounted and wearied men – – –
A number of these plants were cut by the soldiers and the body of them used as food – – — It is a valley surrounded by high bleak mountains — —

(Fouquiera spinosa and Brahea dulcis were characteristic plants of the Valley



Emory's Map.

My dear doctor

I am exceedingly sorry that I neglected to acknowledge the receipt of your letter containing the statistics of the rain fall in St Louis. — Permit me to thank you for the valuable information it contains. — Owing to the very unfavorable weather our projected Lake has not been built yet, but as soon as the dry season sets in we shall go to work. — Owing to the large amount of work in my private office, I have this day resigned my position as Chief Engineer of the Park and an intimate friend of mine has been appointed my successor, but I shall continue in service as a volunteer, adviser or consulting engineer and may have use

8054

[This folder enclosed sheet 71].

différait que par une coloration un peu plus rose des cavités ovariennes et par le nombre de celles-ci. Frappé de cette exception, je revins l'examiner à plusieurs reprises pour m'assurer que je n'étais pas le jouet d'une illusion, et après avoir vainement cherché un autre exemple semblable parmi les centaines de spécimens groupés en cet endroit par le manque de courant. J'étais par malheur entièrement dépourvu de tout instrument propre à m'emparer de l'animal, et je dus me contenter d'une simple mais consciencieuse et attentive observation à distance.

Cette disposition tout exceptionnelle offerte par un seul spécimen au milieu d'une foule d'autres *Aurelia* parfaitement normales, ne me permet de regarder ce fait que comme une anomalie ; mais cette anomalie est d'autant plus curieuse que le nombre *six* et la parfaite régularité des cavités ovariennes excluent toute idée de dédoublement des organes.

Il y aurait donc peut-être là dans le règne animal un cas analogue à celui de certains végétaux qui, normalement verticillés

THE LIBRARY
George Engelmann

reçu la consécration de l'usage, on doit s'abstenir du mérite par trop facile de le modifier. Attacher une si grande importance à la forme, c'est montrer le plus souvent la pauvreté du fond. A cet égard, les règles les plus sages ont été posées au Congrès international des botanistes, tenu à Paris en 1867, et les protestations de quelques opposants étrangers n'ont servi qu'à mieux mettre en évidence l'accord des savants éminents qui prirent part à la discussion de ces lois.

Cependant quelques réformes malencontreuses se sont produites dans ces derniers temps, et peut-être n'est-il pas inutile d'avertir les jeunes botanistes que ce n'est pas en adoptant aveuglément ces innovations qu'ils se montreront plus savants. « Changer la première lettre d'un nom a beaucoup d'inconvénients, . . . il est très-incommode que plusieurs noms génériques

8055

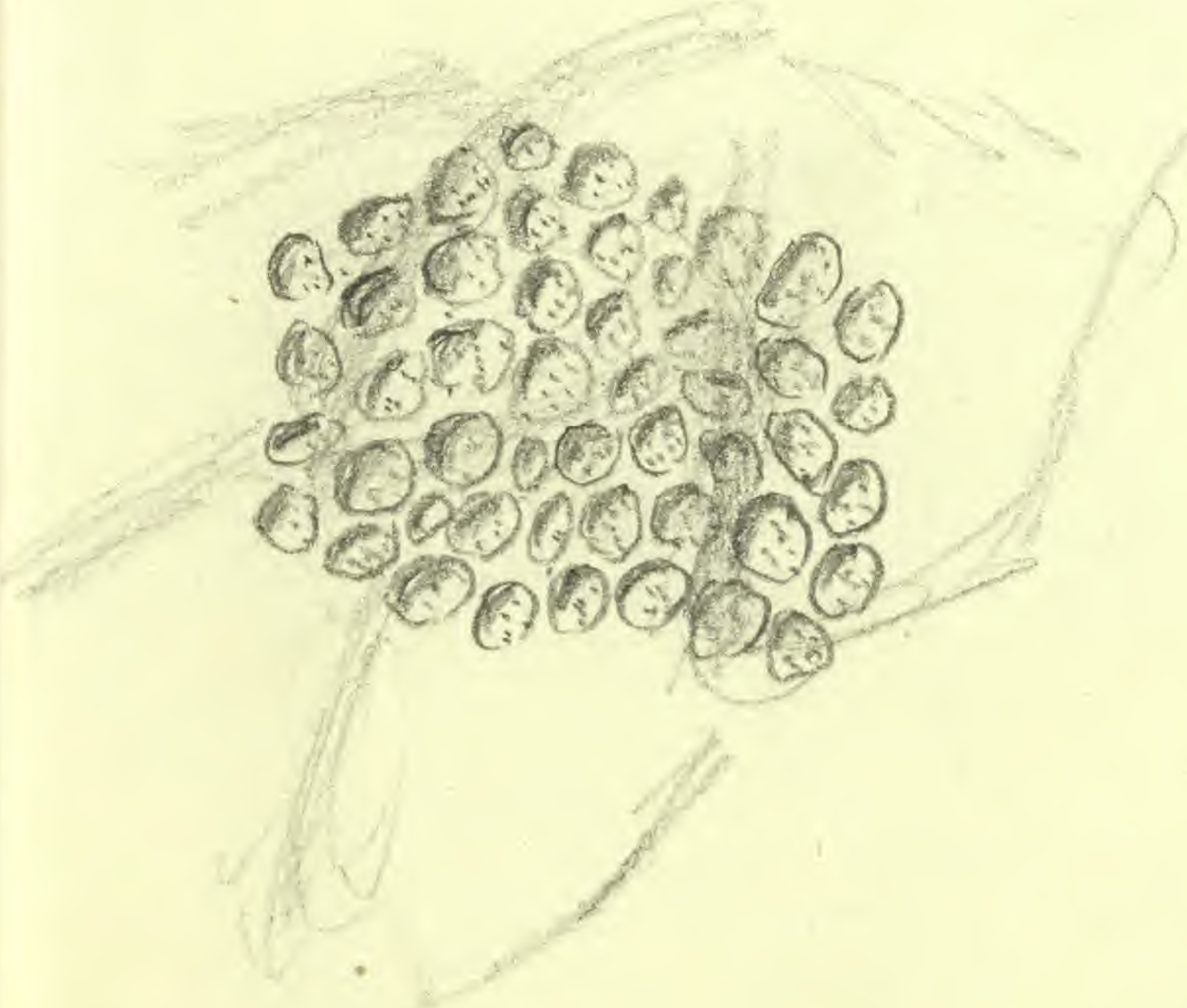
MISSOURI BOTANICAL GARDEN
GEORGE ENGELMANN PAPERS

May 20, 1882

Agave parviflora Torr

Arizona, Schott

x 150



cells somewhat sunk, surface delicately punctulate

whole seed rugulose

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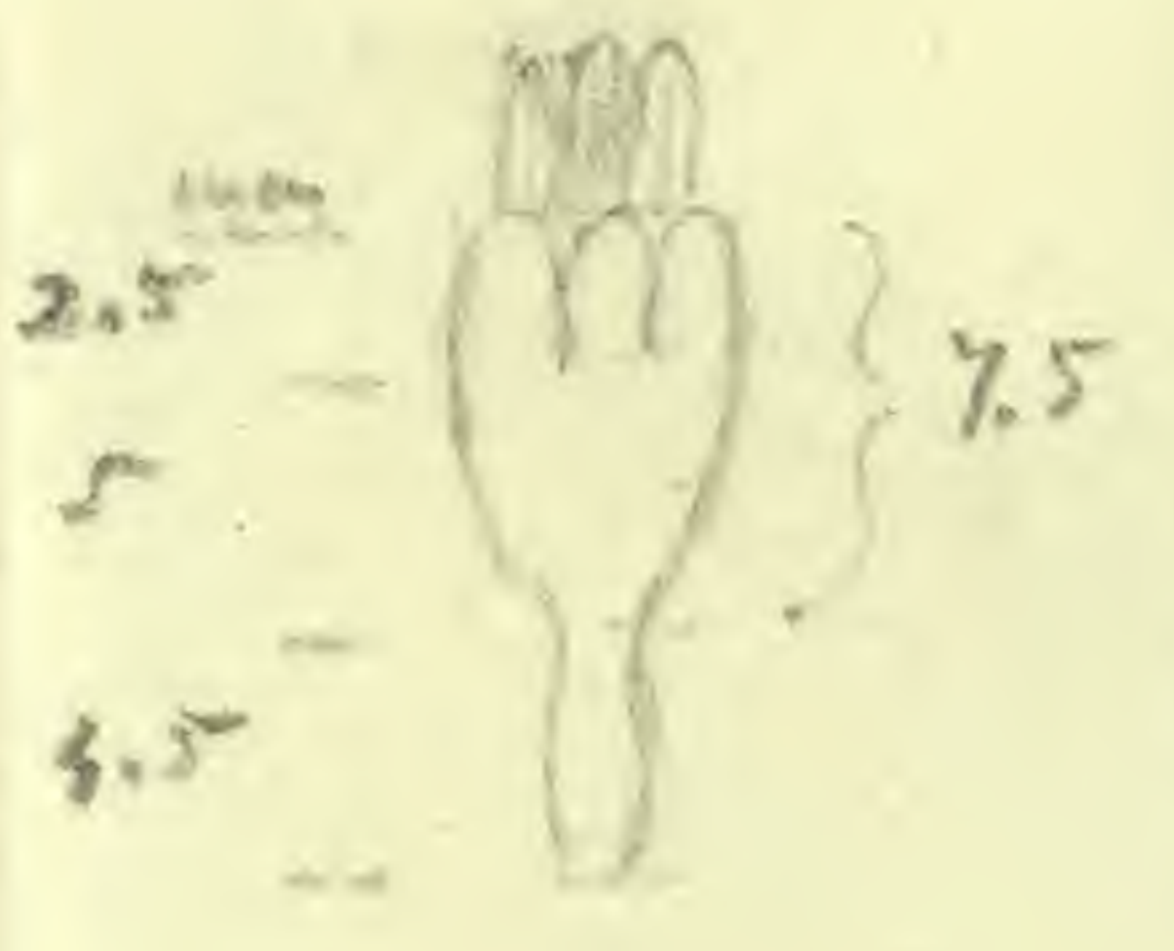
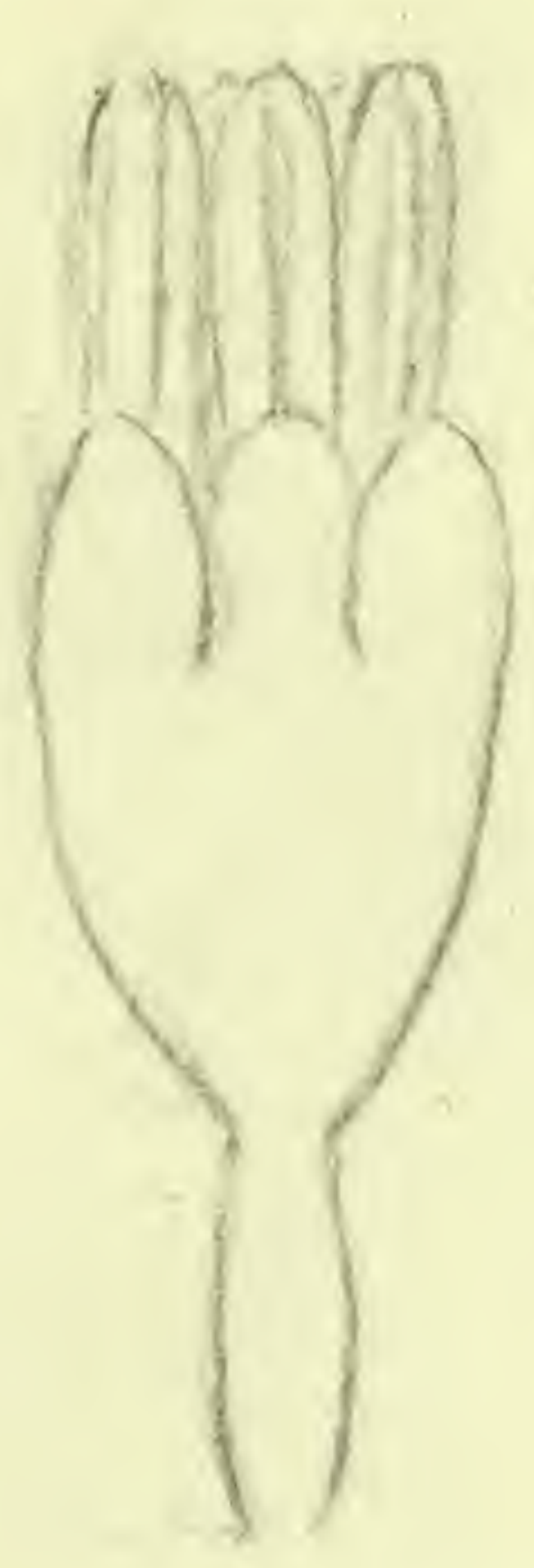
8056

Leitch & Curties
DRUGGISTS
South-west Corner Fifth
and Market
Streets

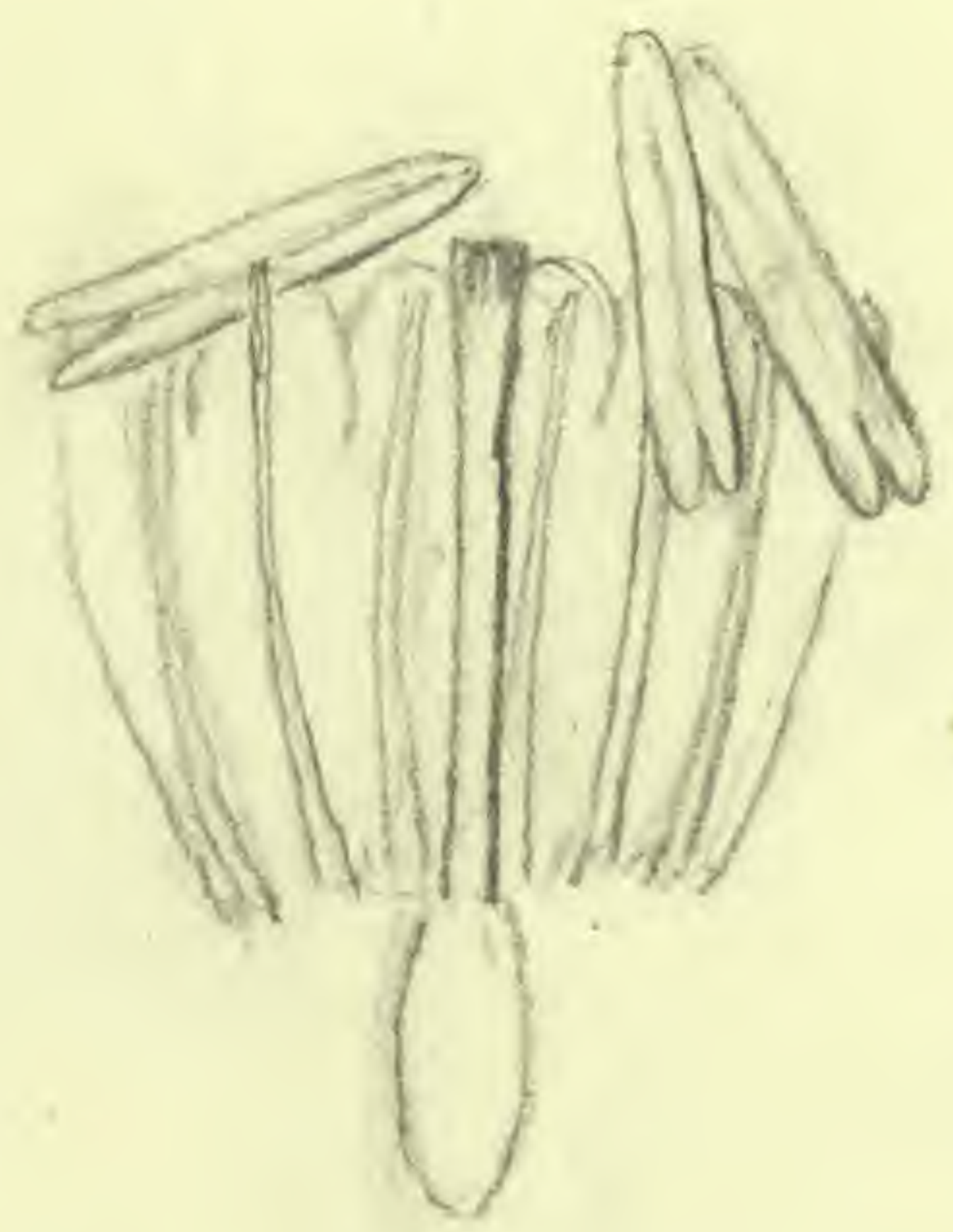
Agave parviflora Torrey Bot Bound Febr 13 1871
"Sonora" (Arizon) A Schott leg.

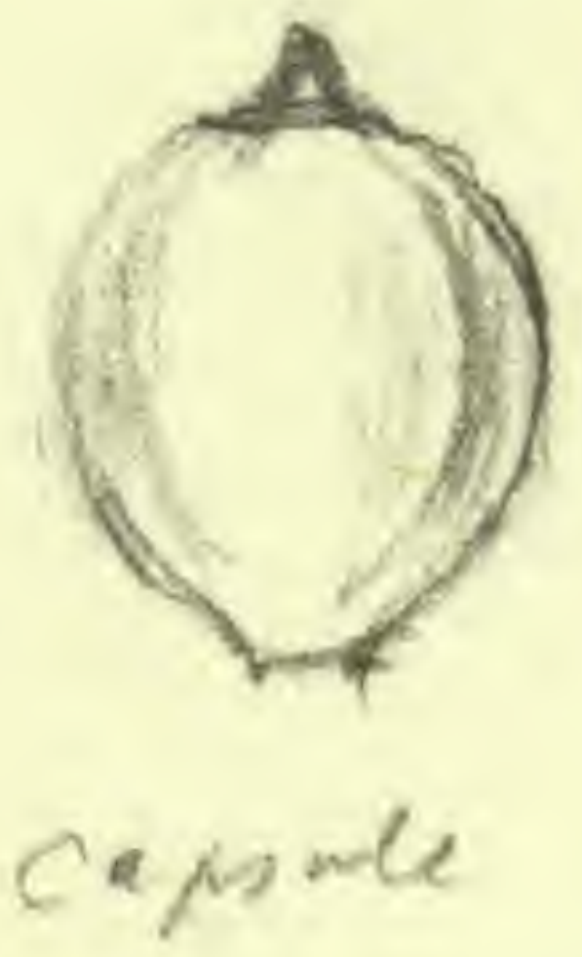


x2



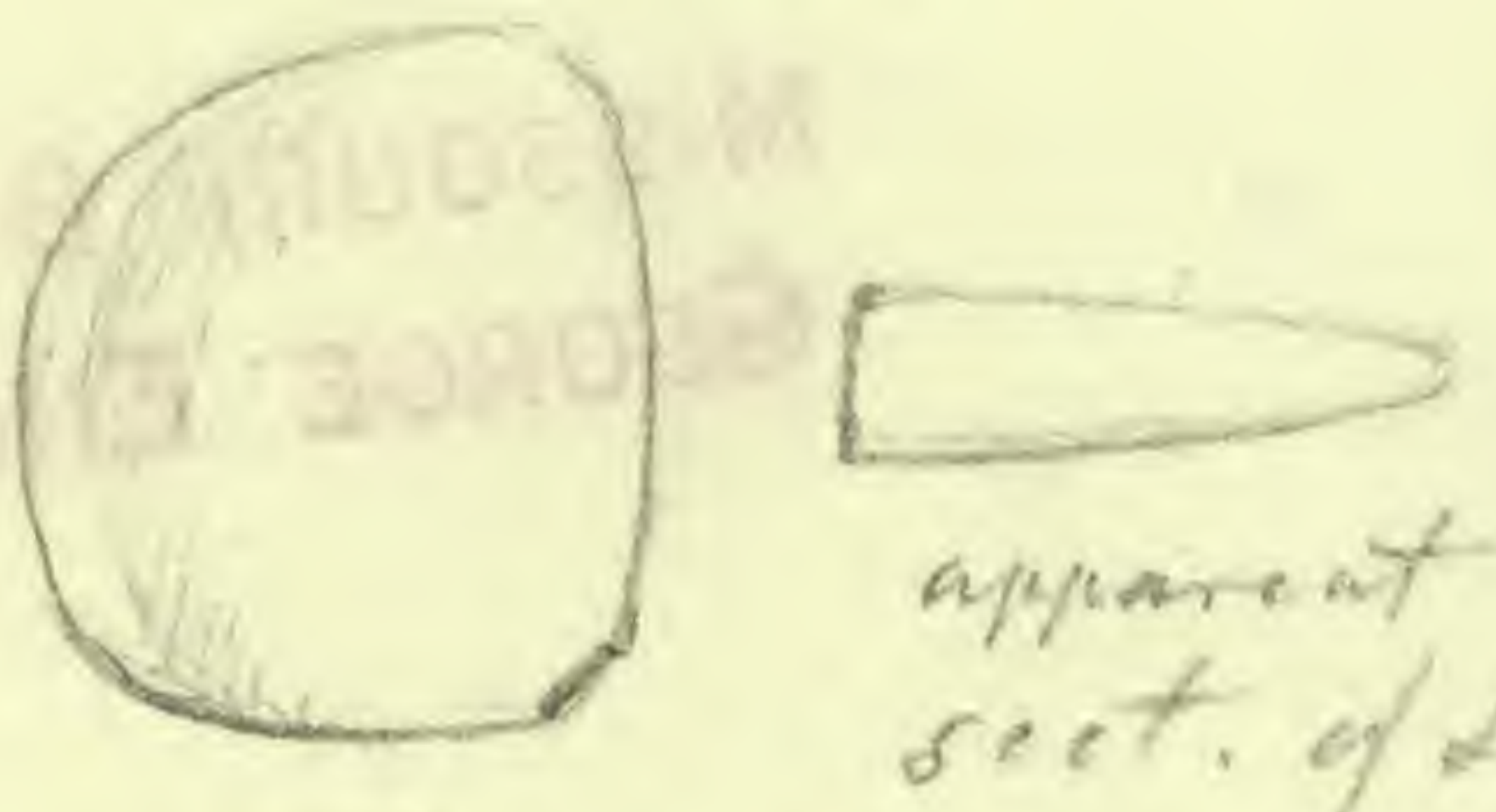
x2





capsule
9–10 mm diam

x4



apparent
sect. of seed

seed unripe

lobes ovate rounded
half as long as campanulate
tube
filaments inserted in base
of tube, as long or slightly
longer than anthers
anthers nearly as long as whole perigon
inserted in middle bilobed below
entire above —
Style as long as perigon
folia parva rosulata terrae adpressa (Schott)

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Leitch & Corlies
DRUGGISTS
South-west Corner Fifth and Market Streets

8057

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Rec^d Aug 24
Ans — 25

1

Davenport. Aug 22^d _ 1871

A Deserti

My Dear Dr

At my old home again. overhauling traps. I stumble on just what was wanting to partly redeem my character i.e. description of Agave. made on the spot 20 years ago. I copy verbatim.

San Felipe June 18th (18~~50~~49)?

Agave? "Mezcal"

"Agave Mezcali (?"

Stem 4-10 ft 1 to 2 inches diameter at base subtended by leaf bracts. which diminish in distance (apart) upwards leaf like below. deltoid acuminate above. arranged in a spiral nodose at their attachment to the stem closely embracing it. its tissue below merging into the stem giving the latter a wavy appearance Lower leaves light green forming a dense cluster at the base of the flowering stalk. spathulate oblong 6-8 in long 2 in broad. with a sharp point. upper leaves pointing upwards. lower more horizontal. Edges of leaves set with sharp retrorsely hooked teeth

8508

This is the plant I have alluded to several times, locality at the Eastern base of the Mts before reaching the Colorado desert from the west. Here also the locality from which Schott says he sent you flowers. The notes were made on the spot. I find them in my original notes, with description of Cacti from the same locality sent to you, among the 1st; I think I may still have capsules which I certainly collected. I remember distinctly having a 4 celled capsule, only anomalous of course. — I do not care to spoil the description by own recollections but it is my impression that the color of flowers was pale greenish yellow?

On following sheet I add a less complete description of a species seen by me on the Pacific coast near the boundary line —

C C Parry

(panicle 1 or 2 feet long !)

; upper leaf bracts, within 1 to 2 ft of the summit of the stem, having in their axils, peduncles, horizontally flattened, the middle branches the longest (2 to 3 inches) dividing at the extremity into close bundles of pedicels supporting a thick mass of yellow flowers on smooth green ovaries, the flower branches spreading more horizontally below, nearly perpendicular above ; flowers 6 sepaled. every alternate one thickly nerved on the outside, each bearing a stamen on a thickened disc on the inside, filaments horizontally thickened tapering upwards, anthers 1/3 inch inserted about the middle; pistil whitish-yellow cylindric 3 knobbed at top, 1 inch long, equalling or exceeding the stamens 3 times the length of the petals

Capsule 3, rarely 4 celled, dehiscent above seeds black shining, roots fibrous at the insertion of lower leaves enclosing a thick fleshy mass, 3 inch diameter, forming the edible part when cooked

Hab. dry hills & valleys about San Felipe, its crowded clusters of leaves covering patches of 4 to 6 ft diameter few having flowering shoots at the same time" ! ! ! ! (presumably written by J. M. Bigelow)

Agave Paniculatae

Agavae florentes   caulescentes viviparae

A rigida Mill
Karwinskiana Zucc
(angustifolia Haw)
Sisalana
Ixtli Karw.
A. Jacquiniana Gawl

A Antillarum Desc
sobolifera Salm
A Theometl Zucc

2 Groups – rigida & ~~perhaps~~ with Jacquiniana
Antillarum with sobolifera & Theometl
[subcaules] (see Jacobi 133)

acaules viviparae

A. vivipara Lin

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[illegible]

caulescentes capsuligerae

A Cantala Gel.
A lurida Ait Jacquini–

Caulescentes flor. ignot (Kunth)
A VeraCruz Haw   Kunth. 827   Jacobi 111 : acaulis!

DIRECTIONS FOR SENDING INSECTS.

All letters desiring information respecting noxious and other insects, should be accompanied by specimens, the more in number the better. Such specimens should always be packed along with a little cotton, wool, or some such substance, in a little pasteboard box that is of convenient size, AND NEVER ENCLOSED LOOSE IN THE LETTER. Botanists like their specimens pressed as flat as a pancake, but Entomologists do not. Whenever possible, larvæ (i. e. grubs, caterpillars, maggots, etc.) should be packed alive, in some tight tin box—the tighter the better, as air holes are not needed—along with a supply of their appropriate food sufficient to last them on their journey; otherwise they generally die on the road and shrivel up to nothing. Along with the specimens send as full an account as possible of the habits of the insect, respecting which you desire information; for example, what plant or plants it infests; whether it destroys the leaves, the buds, the twigs, or the stem; how long it has been known to you; what amount of damage it has done, etc. Such particulars are often not only of high scientific interest, but of great practical importance.

OFFICE OF THE
STATE ENTOMOLOGIST,
Room 42, Mutual Insurance Building,
N. W. Corner Sixth and Locust Streets,

St. Louis, Mo., 187

Dear Dr.

There is a roll of proof at my office. Can't spare my man this P.M. to send it to house & find no place to leave it here. Shall be out of town to-morrow (Friday). Call at office for it. Pergande is always there. Conyngham is looking for return of 2nd Revise

Yours ever
C. V. R.

Thursday 3. P.M.

8059

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– in U.S. Flor.
V. viviparae ex inflorescentia
C caulescentes

Agave florentes

– paniculatae

Agave ~~corymbi~~ cymi florae

A. Americana L. Kunth 819 Jacobi app. 24
VC A. Jacquiniana Gawl. Bot Mag. 5097 Jacobi p. 96 Kth 827
– A. Parryi Engl. in Coll sem 1867 (distr. in Europa 1868) north Arizona
– A. Palmeri Engl. 1869. distr. sem. South Arizona.
(V?)C A. Antillarum Descourt. Kth 824 ex spec. Doming. Parry 1870
V C A. Sisalana Perrine ex spec. Florid. Parry 1871 = sobolifera?
– A. Mexicana Lam ~~ex spec. Wislizen etc~~ Jacobi 104
– A. Newberryi Engl. (Ives Exp.
– A. Couesii Engl. (= prob. fort. Whipple) = lost!!
~~C A. Karwinskii Zucc. = A. angustifolia Haw (fide Jacobi 95)~~ Jacobi 93
C A. Cantala Galeotti Jacobi app. 45.
A flavovirens Jacobi 257
~~A. Jacquiniana Gawler Bot~~
C A lurida Ait. Jacobi 102 & 109 Bot Mag 1522
A. potatorum Zucc. Jacobi 79. Kunth 824
A. scolymus Karw. Jacobi 79 83 & 231 Kunth 824 Refug Bot V t. 328
C A rigida Mill (= angustifolia Haw.) Jacobi 94
A. Saundersii Hook Bot Mag. 5493. Jacobi 223
C? A Theometl Zuccagni Kunth Jacobi 70 = vivipara L.? ex Jacobi 133
VC A. sobolifera Salm Kunth 822
(= A vivipara Lam & Mill. (Jacobi 121)
~~A xylacantha Salm Jacobi 209 & 45~~ probably rather geminiflora
V A vivipara Lin Jacobi 131
A scabra Salm Jacobi 88 Wislizen. Chihuahua ex spec. Wislizen.
(nomen falsum
A Fürstenbergii Jacobi Nachtr. II. 72
VC A. Ixtli Karw. Hort. Muret Jacobi 95

[These sheets (72 + 73) preceded & comprehend sheets 74–167].

8060

MISSOURI
GEORGE ENGELMANN PAPERS

~~ov~~ verse see
Thyrsoideae
racemiformes

Shaw
ann
verschieff
Newberry

Agave florentes

Paniculatae

Jacobi

p. 70 A. Theometl Zuccagni; ex Kunth – a very unsatisfactory description

79 A. Potatorum Zucc ex Kunth 5. 842. scapus strictus apice paniculatus, pedunculis brevibus ascendentibus – 10 feet high, branches ascending 3–4 inches long tube & lobes equally long, 1/2 inch – District, sp. in Hort Berol 1843

96 A. Jacquiniana Gawl; scape 12', lower branches 2'; perigon 2 inches, tube 8''' lobes 16''' capsule black [Weiss: scape 15' branches 1–1½' fl. 3½" ovary 20''' (tube 10'''? lobes 10'''?) anth. 13–14''' "perig. 2/3 divided" capsule 2"

102 109 A. lurida Ait Zuccarini; Trunk 1' scape 16' 4" diam. Perig. 2" (anth. 1 inch) capsule somewhat stipitate

131 A. vivipara Lin scape 10–12', branches 3" style & stamens as long as perigon, often abortive

223 A. Saundersii Hook Bot Mag scape 14' branches 4" fl. 2–2¼" ovary 1½" long

231 A. Scolymus Karw scape 10' branches 4" pedicels 4–5''' ovary 1¼", perigon 1½" lobes as long as tube, stamens 1¼" from a little below the throat, anthers 8''' {Kunth En 5. 824: whole fl. & stamens 3" perigon 15''' lobes 1/3 shorter than tube (lobes 9 lobes 6?) anthers 6''' long

258 A flavovirens Jac scape 6½' branches 5" tube 5''' long 4½ wide lobes reflexed 7''' long, stamens inserted just below throat, 18''' long

304 A Mexicana Lam scape 18' panicle 8' flower 2¾" ovary 1¼" tube 8''' lobes 10''' stamens 2½" long, from the inside of Perigon anthers 1" style 3½" much longer than stamens perigon jointed and deciduous on ovary (? ?)

app. p. 45 A. Cantala Gal (not Haw) scape 8–9' branches 9–10". fl. 2½" lobes 10''' ovary 12–13''' long stamen 2½ anth 1" (tube therefore! 6–7''')

Jacobi pag Tubus lobique fere aequilongi,

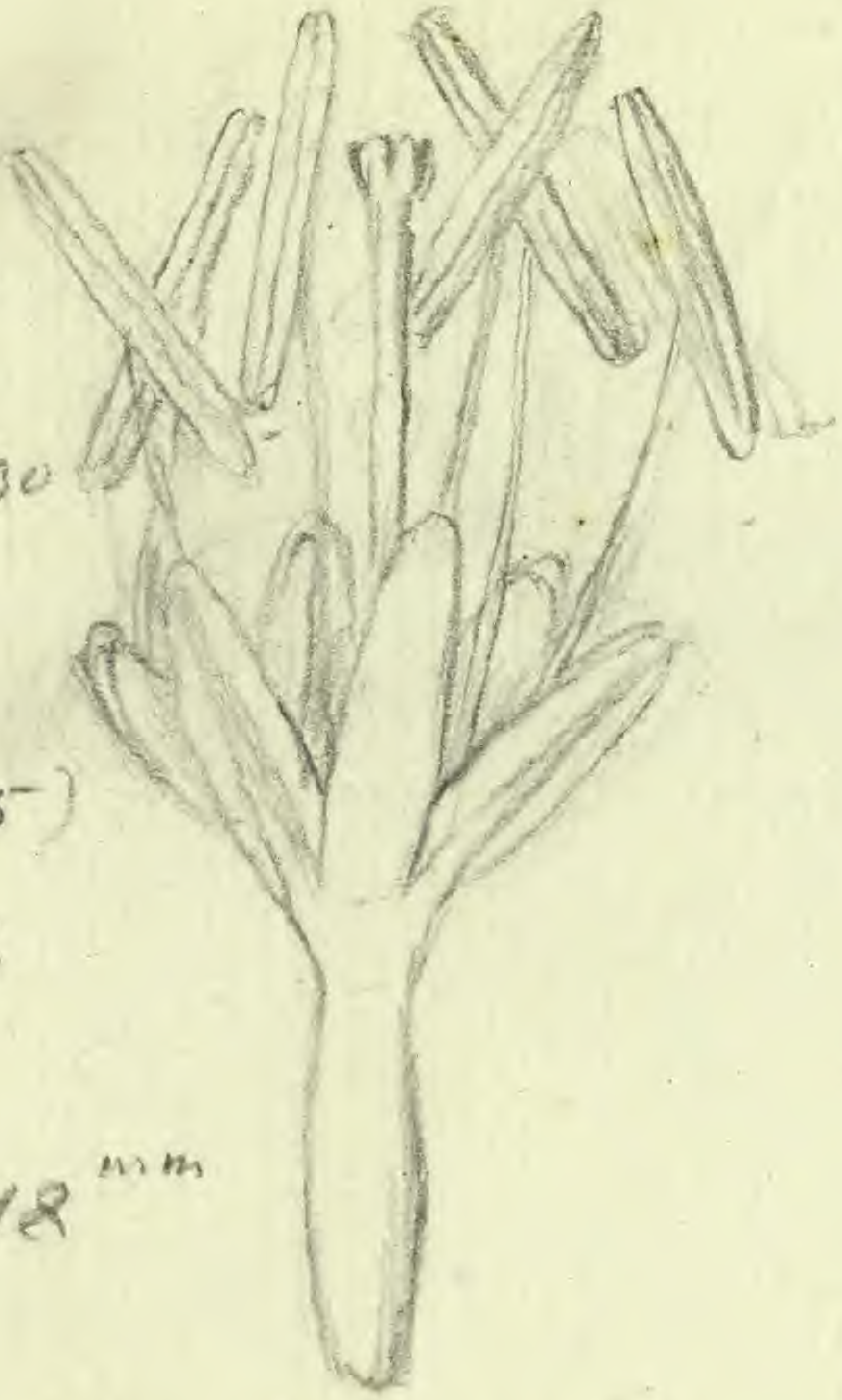
79 A. Potatorum Zucc (6:6)
231 A Scolymus Karw (9:9)
258 A flavovirens Jac (t. 5 l. 7)
302 A Mexicana Lam (t. 8 l 10)
opp 45 A Cantala Gill. (t 6-7 l. 10)

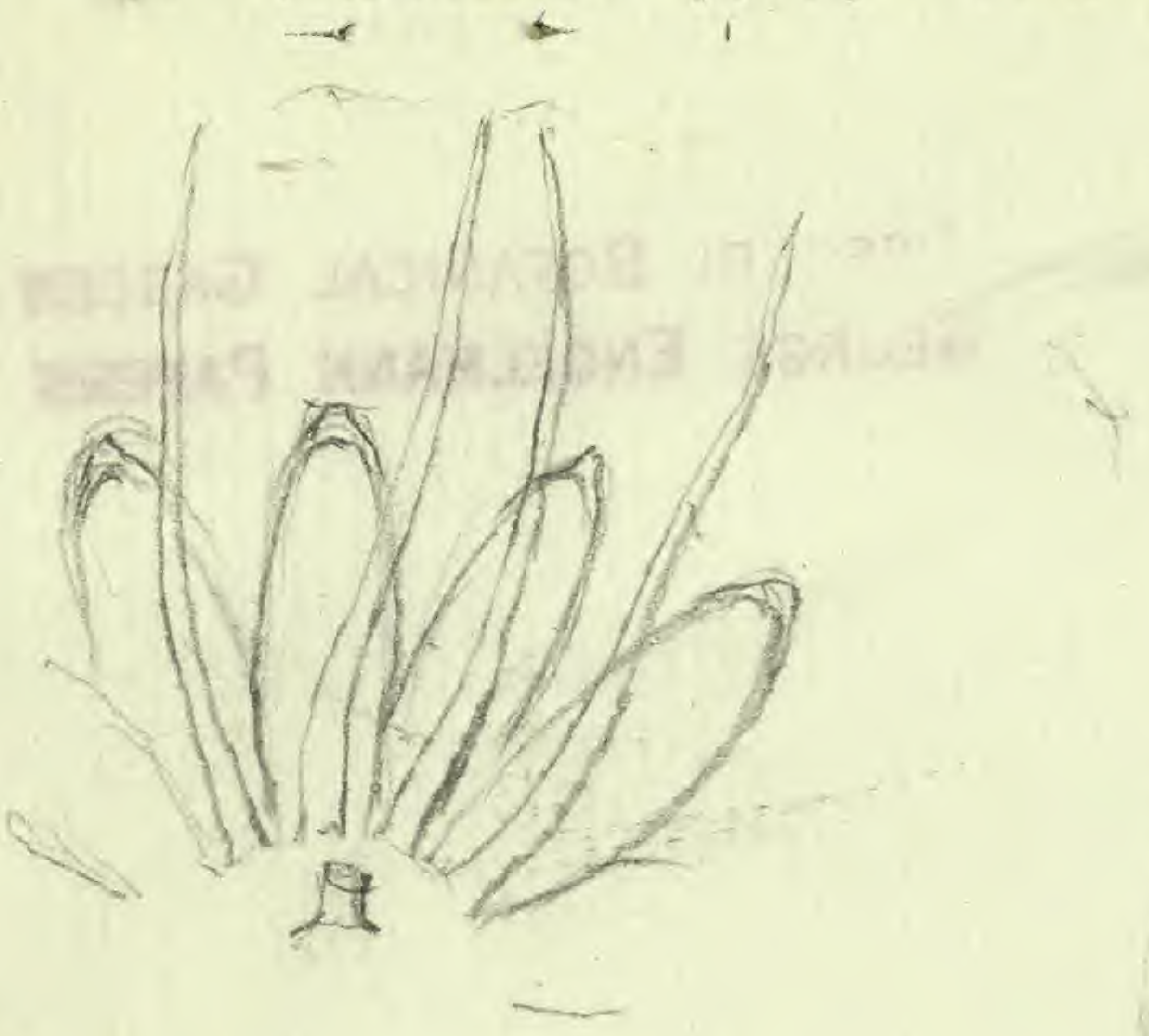
Tubus lobis duplo brevior
96 A. Jacquiniana Gawl. (t. 8 l 16)

8061

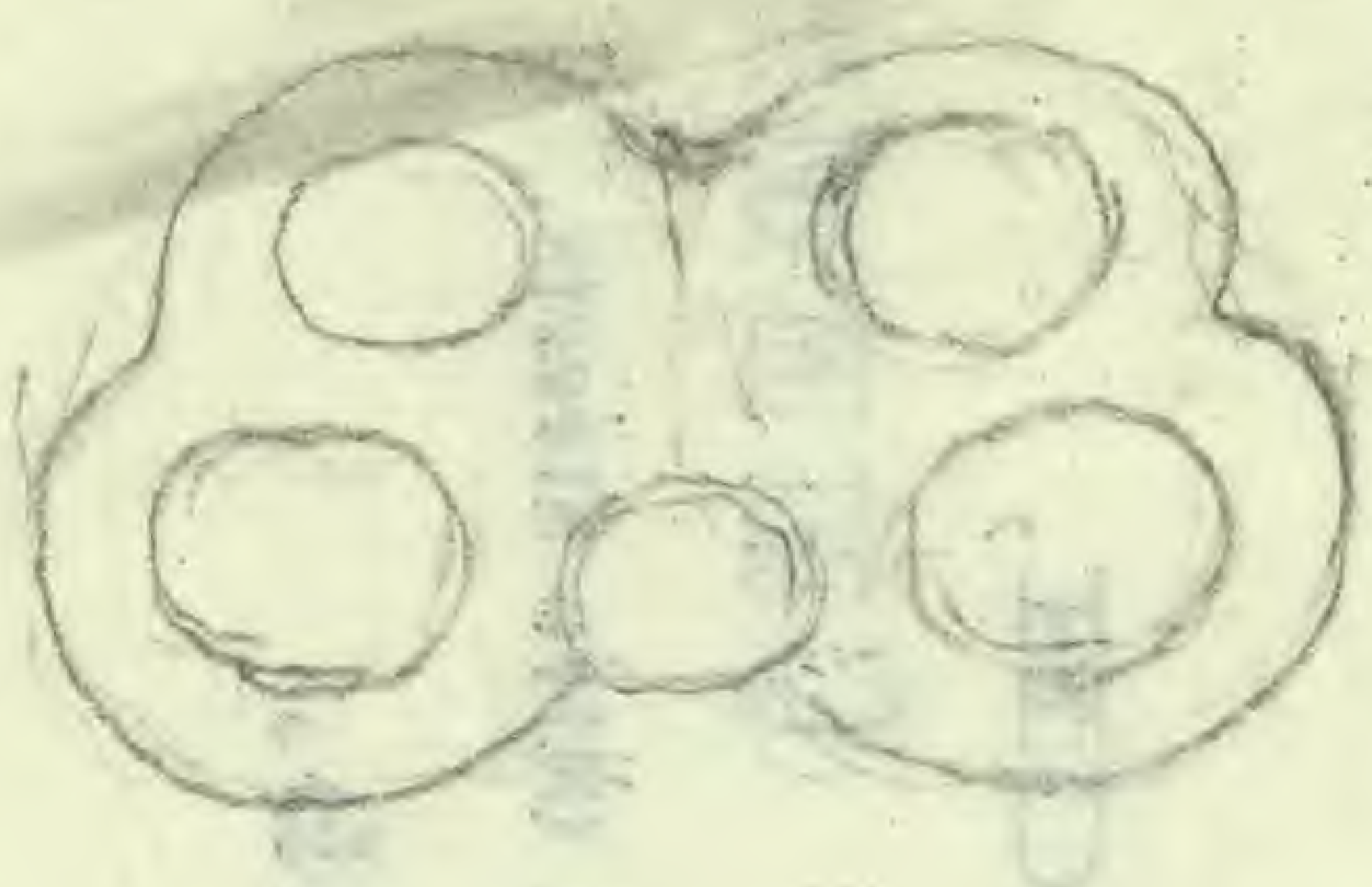
Agave Deserti Nov 15 1875

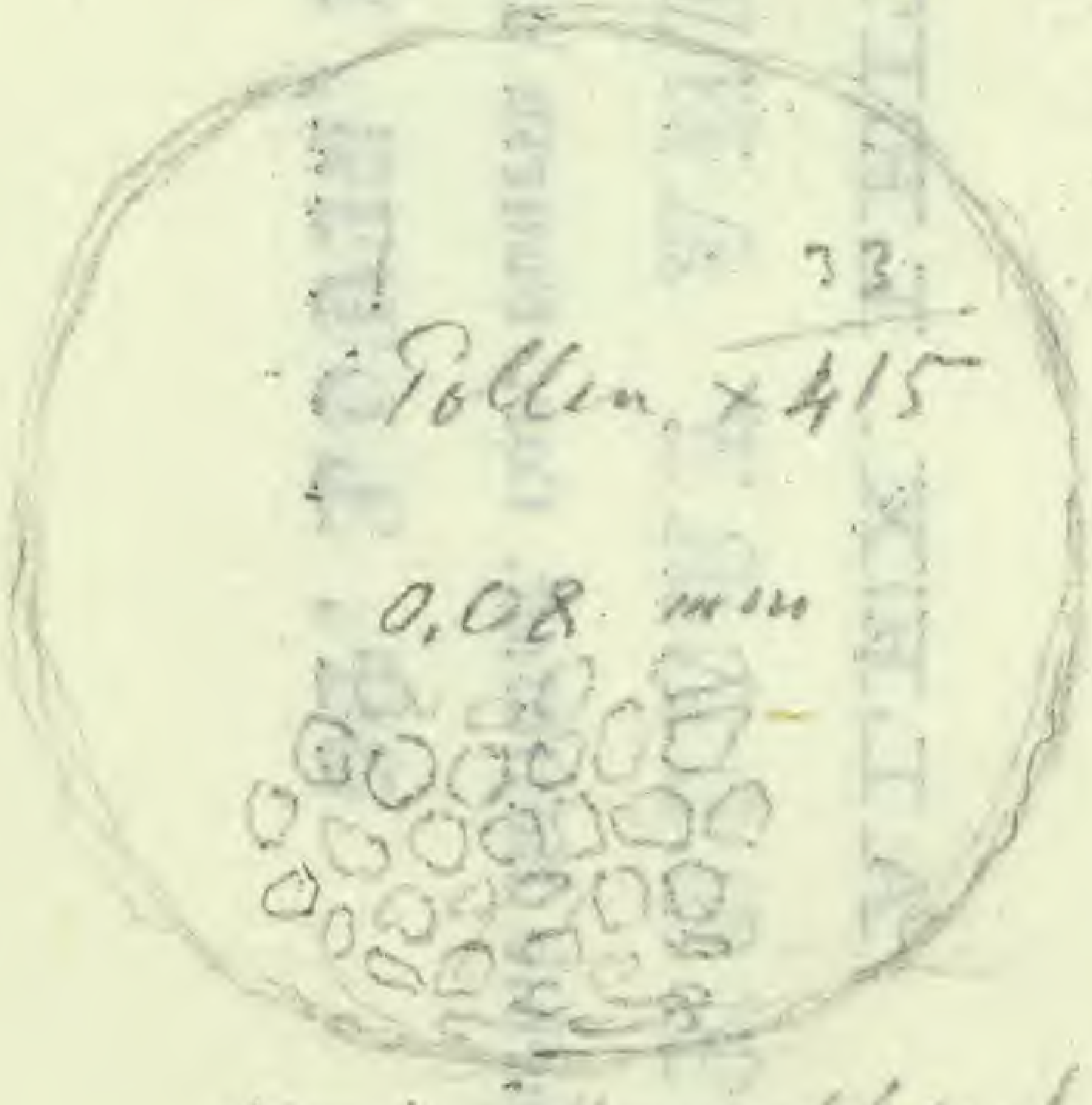
Dr Palmer 1875 No 88





sect of Anther ×10





marks brought out by sulphuric acid

dry leaf was 1¾' long 6" wide at base, 3" above base
but not contracted, or slightly — gradually tapering
Terminal spine 10''' — broadly grooved, keeled below, running down with brown hard
teeth small 1-1½ lin long, 1 inch apart margin about 2 inches

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MISSOURI BOTANICAL GARDEN

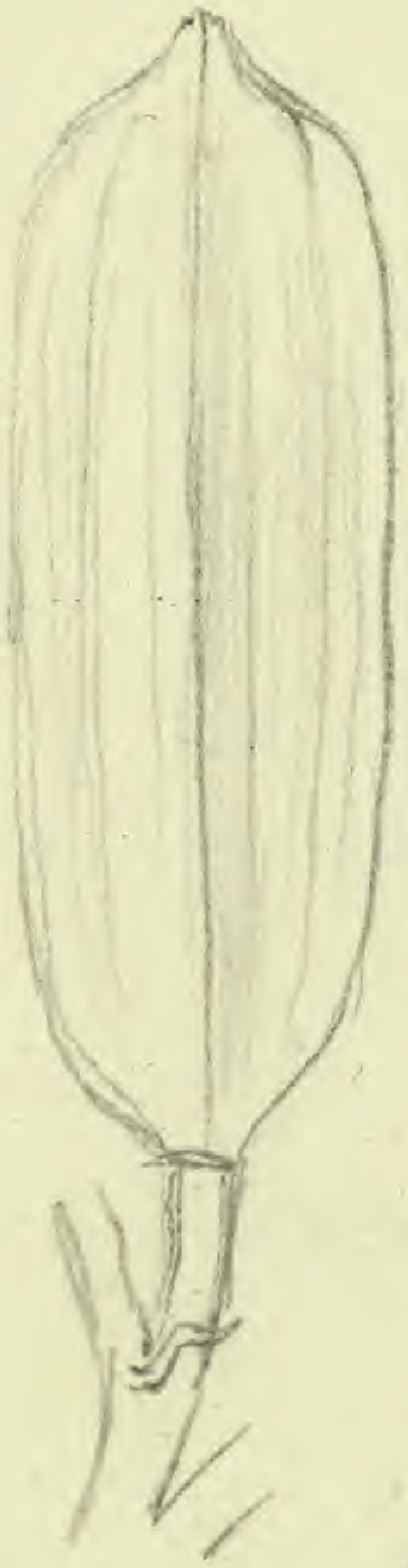
8062

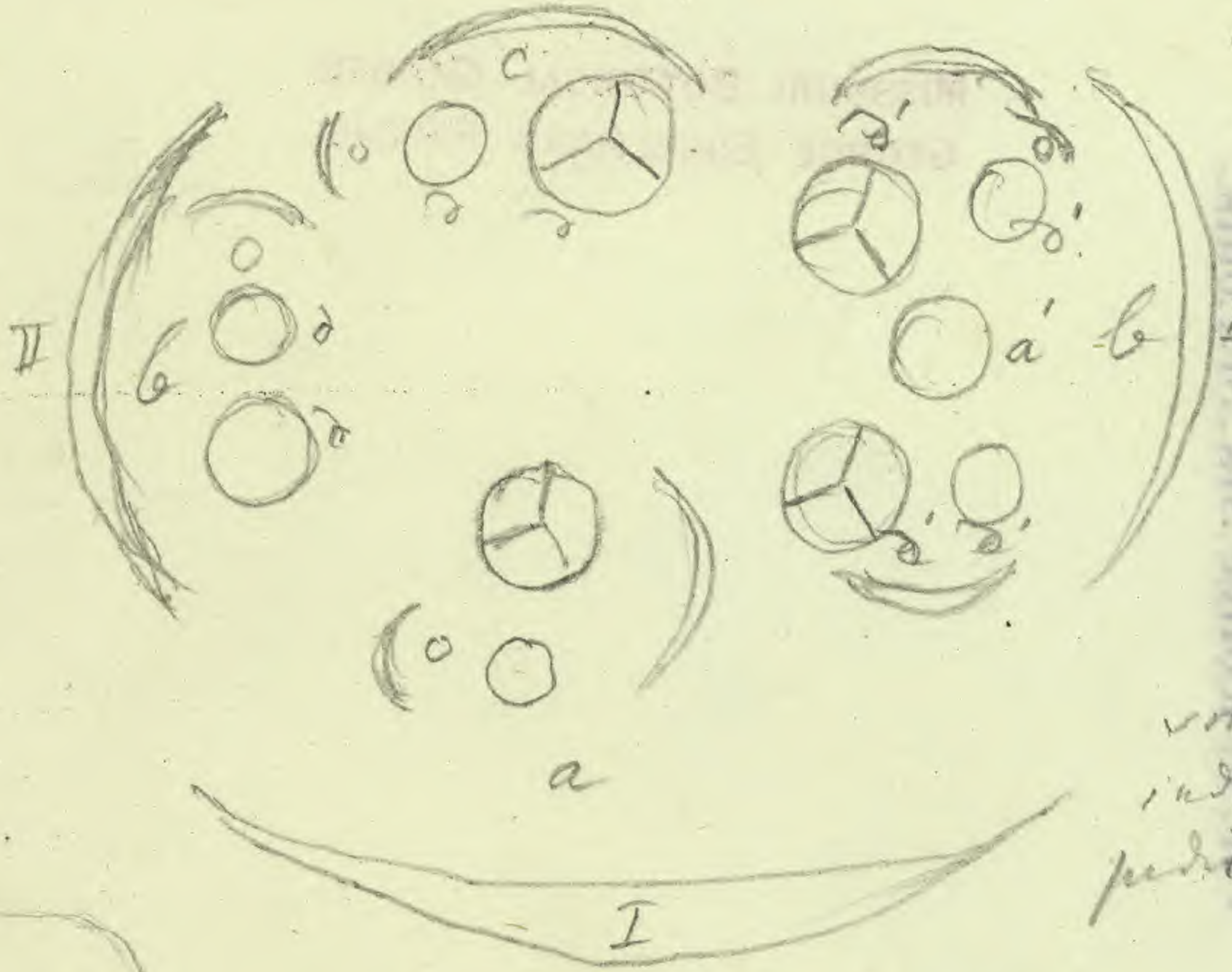
ALEX. LEITCH,
APOTHECARY AND CHEMIST,
Marble Building, Cor. Fourth and Olive Streets,
ST. LOUIS, MO.

Agave deserti ? Nov 5 1875

Inflorescen

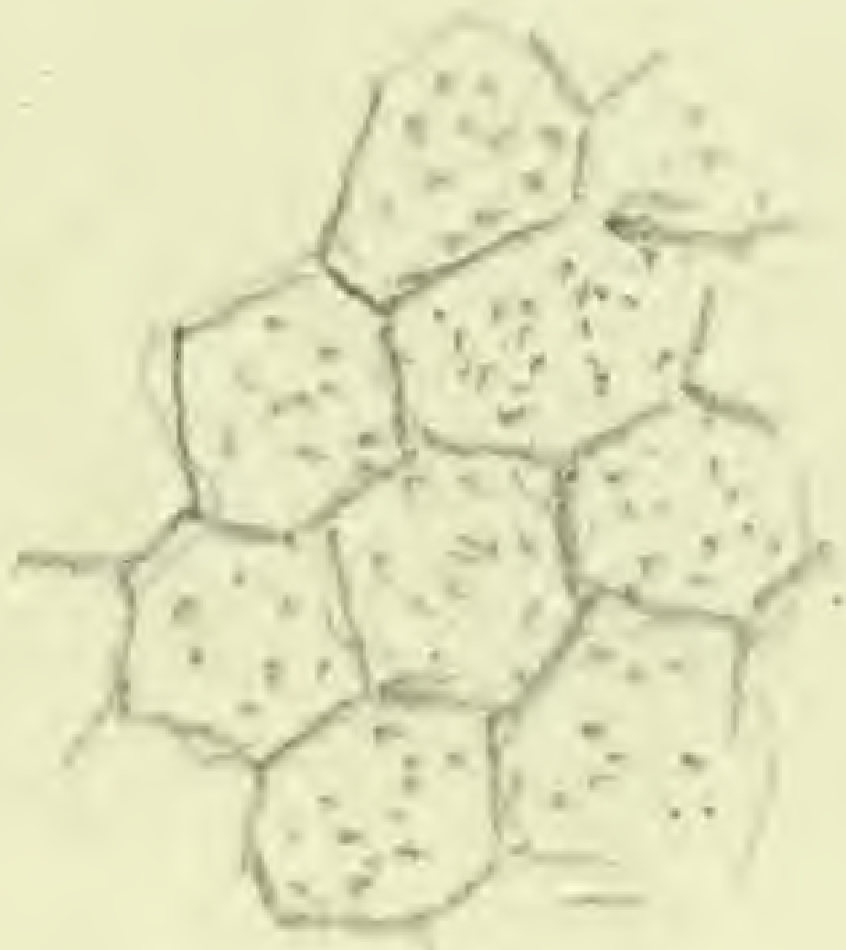
Parry mis from San Francisco





a central infl
b. b. lateral pair of infl
c posterior ?
a' central flow
∂∂ pair of fl
∂'∂' secondary
(with tertiary pair

smaller circles indicate sterile pedicells (not later flowers)



surface $\frac{1}{150} = 0.033$ mm

×150
cells flat, not elevated

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Alex. Leitch,
APOTHECARY & CHEMIST,
Cor. 4th & Olive Sts., St. Louis.

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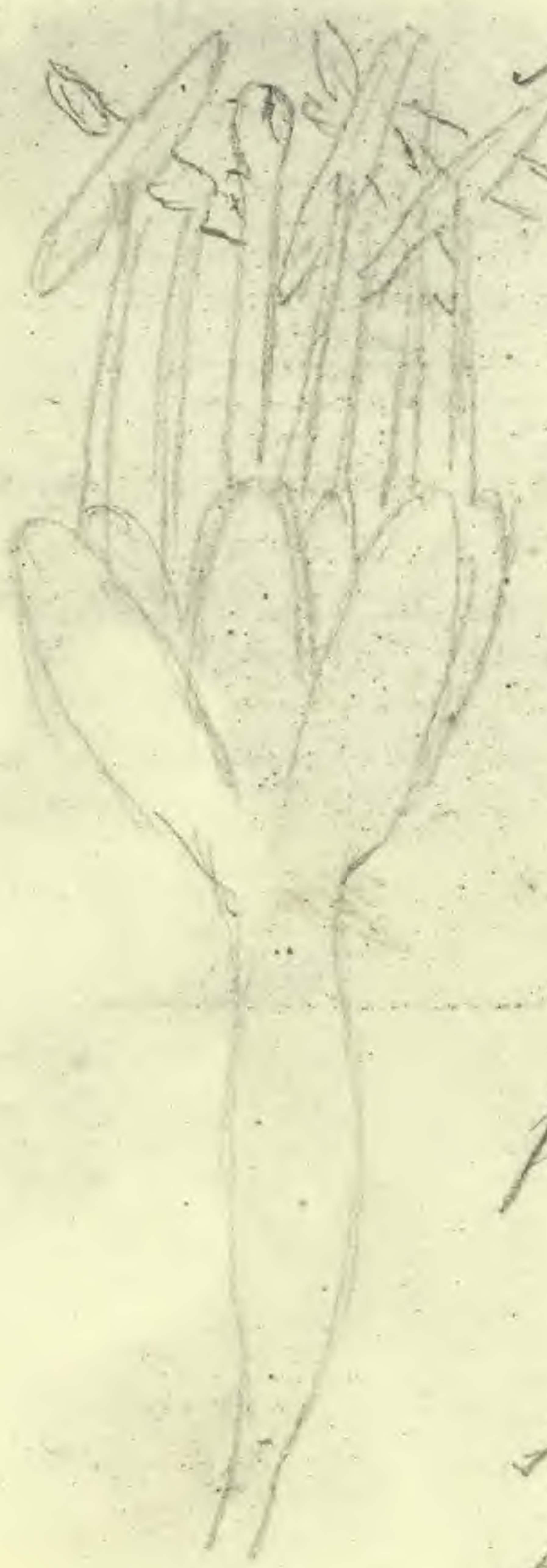
anth. 16

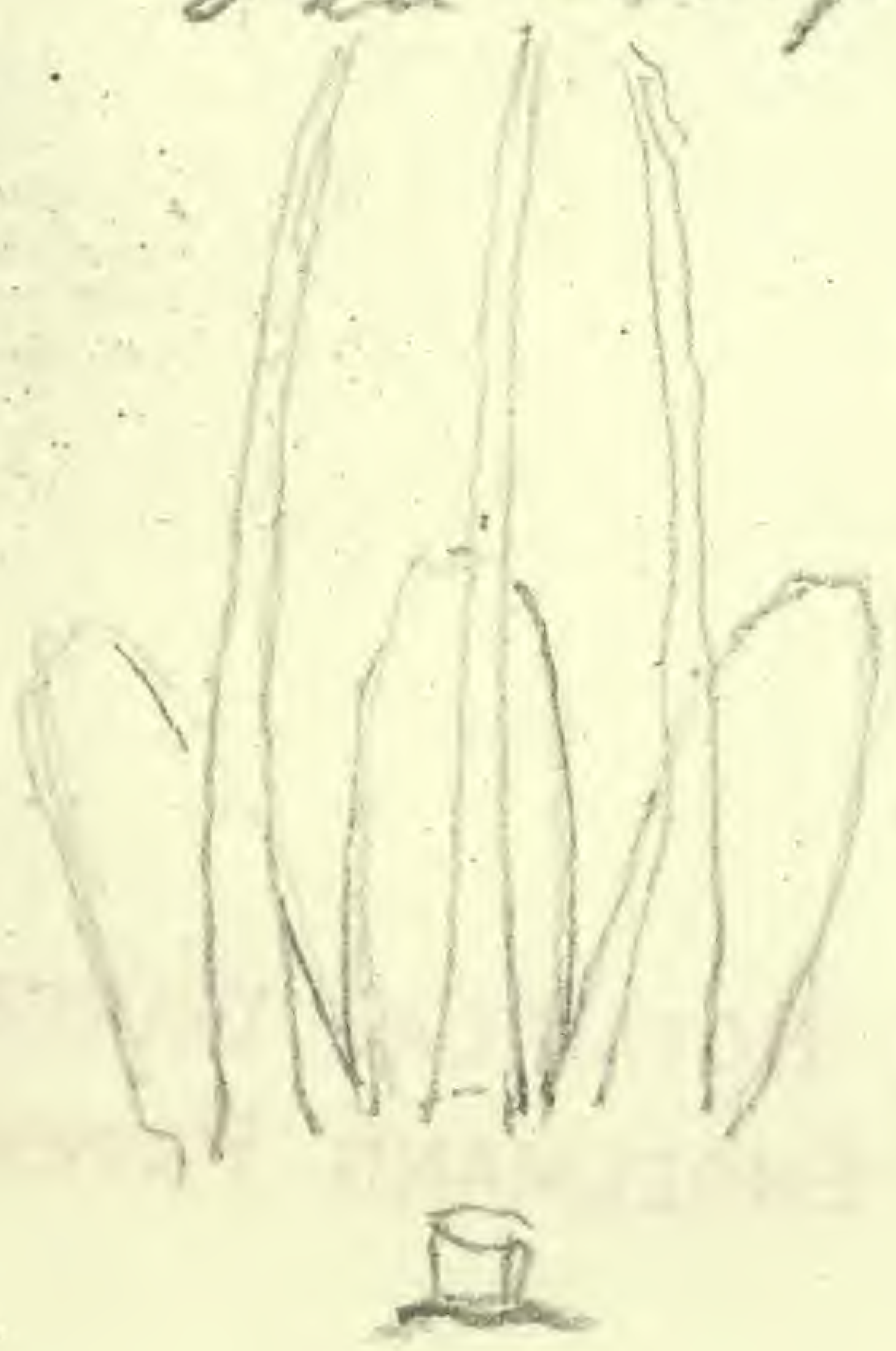
Agave deserti — July 14 1882

San Felipe Cal. Parish No 413

June 1882

Scape 6-20 feet high
2-3 in. diam.





15

16

6

25

perigon 11 lines
tube 3 l.
lobes 8. l.
stamens inserted in faux
filaments about 7½ lines longer than lobes
style when fully developed, longer
anthers 8 lines long

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MISSOURI BOTANICAL GARDEN

8064

ALEX. LEITCH
APOTHECARY & PHARMACEUTIST
COR. 4TH & OLIVE STS. ST. LOUIS.

Agave Deserts . Parish writes July 5 1882

Eastern Slope of Mountains, Vallecito and San Felipe – the Agave covers miles in thousands and thousands, in full bloom in June – found 16 feet high, but others seen, not measured were probably 20 feet high; scape 2–3 inches diameter; branchlets are a perfect mass of flowers. Shaking a scape, especially in the morning, a perfect shower of (insipid) sweetish nectar falls, with a slightly disagreeable flavor.

Bracts large broadly triangular, numerous

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Little, Brown, & Company,

Law Booksellers,
Publishers
and
Importers.

254 Washington Street.

Boston July 9th 1882

Frank Thomas Esqr
St Louis Mo:

Dr Frank

Not knowing any other Bookr
at St Louis I have thought you might
be good enough to send us
7 Copies of "Engelmann's Genus

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July 8 1875

Agave Deserti

glauca, foliis crassis ovato lanceolatis, ~~crassis~~, sursum attenuatis super basi dilatatam leviter contractis, in spinam elongatam graciliorem excurrentibus ~~desinentibus~~, compressam, supra ad medium anguste canaliculatam, ~~margine cartilagineo~~ longitudine sua vel ultra in folii margine decurrentem; aculeis lateralibus flexuoso recurvis mediis folio majoribus ~~[illegible]~~ basi dilatatis, ~~[illegible]~~ triangularibus, ~~densis~~ minoribus.

In the California desert — It is the same that Maj. Emory on Nov 29 1846 found so distressingly abundant in the arid valley south east of San Felipe and of which he preserved some flowers. —

Leaves before me (a small very specimen) 9" long 1½ wide, very glaucous, terminal spine 1¼–1½ inches long, pale brown with a narrow groove above which reaches up to above the middle of the spine. Lateral spines compressed, hooked and twisted the longest about 3 lines long. Margin of broad base of the leaf closely beset with short triangular spines.

Parry notes June 18th (was it 1850?) San Felipe. Stem 4–10 feet high. 1–2 inches diam, strongly bracted leaves light green, [glaucous?], 6–8 inches long 2 inches broad, with large recurved hooked teeth yellow flowers; anthers 4 lines, pistil 1 inch long. 3 times the length of the petals. Dry Hills & Valleys about San Felipe.

J. N. Hitchcock writes July 17 1875: stalks 12–15 feet high. flowers yellow; largest leaves 12–15 inches, largest spines 2 inches long.
Is used for Mezcal (as already Emory reported)

over

8066

Dr Palmer sends 1875 a leaf & flowers etc
leaf 21 inches long 6 inch wide at base 3" upward
scarcely contracted — terminal spine only 10''' long
laterally compressed, keeled, scooped out but not
deeply grooved — brown dry margin running down
about 2 inches. Teeth 1 inch apart nearly
straight, small, only 1–1½ lin long.

Agave Pringlei largest leaves 16 inches long
2½ in wide at base & 1½ near middle
C. A. Orcutt

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anther 19 mm

Agave Pringlei

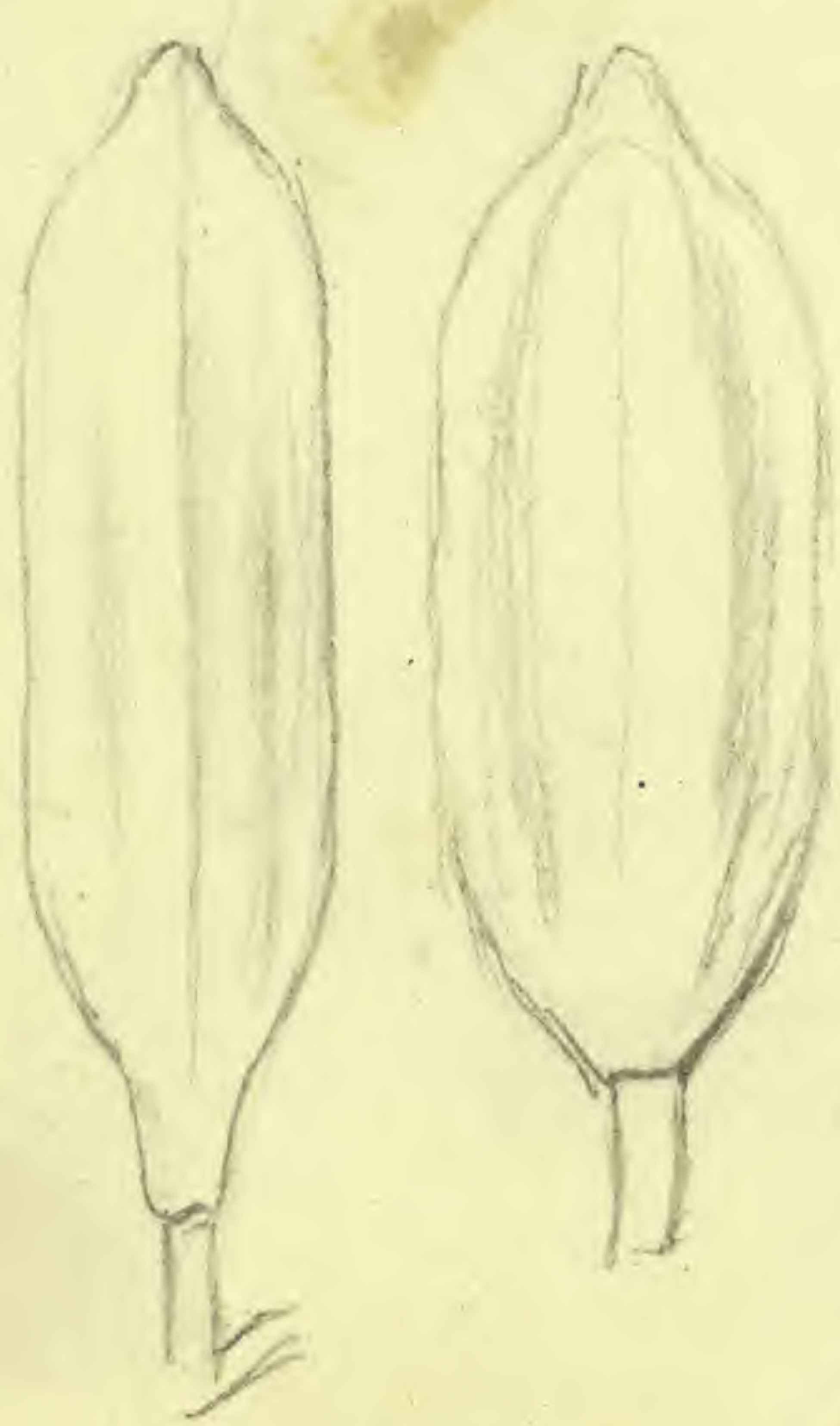
or is it Deserti?

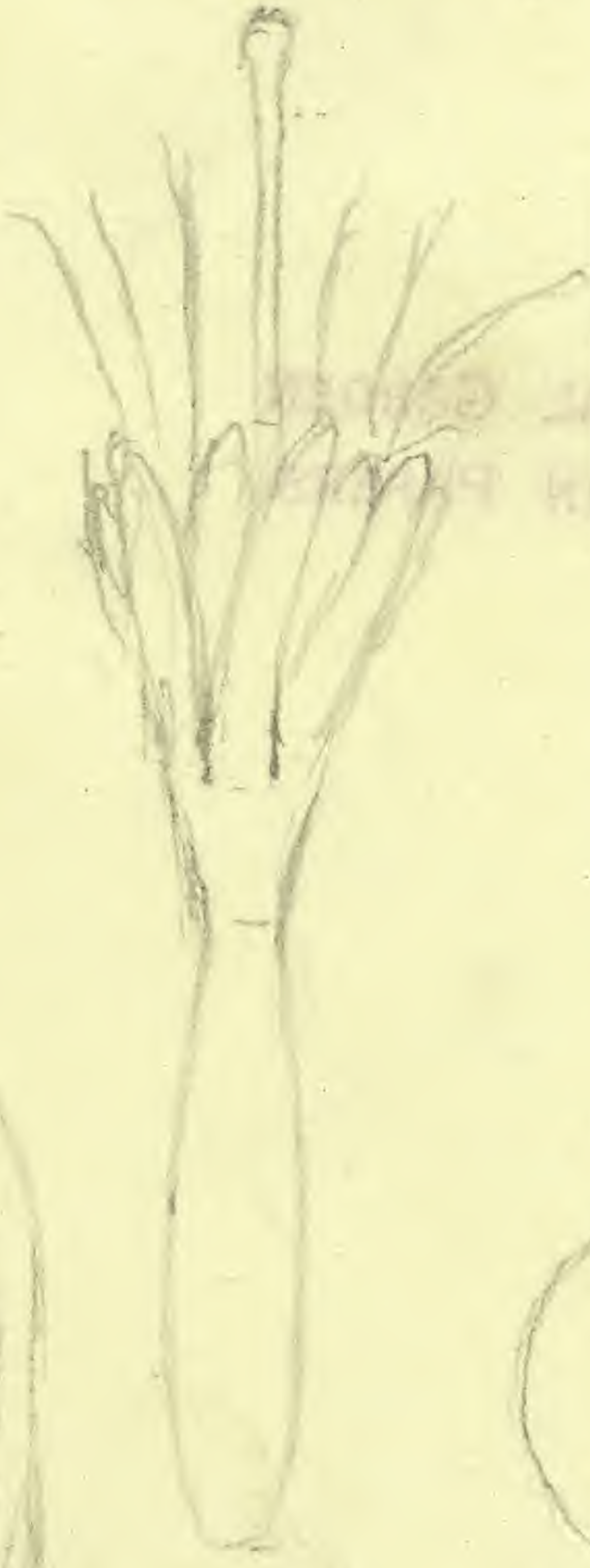
Oct 26 1882

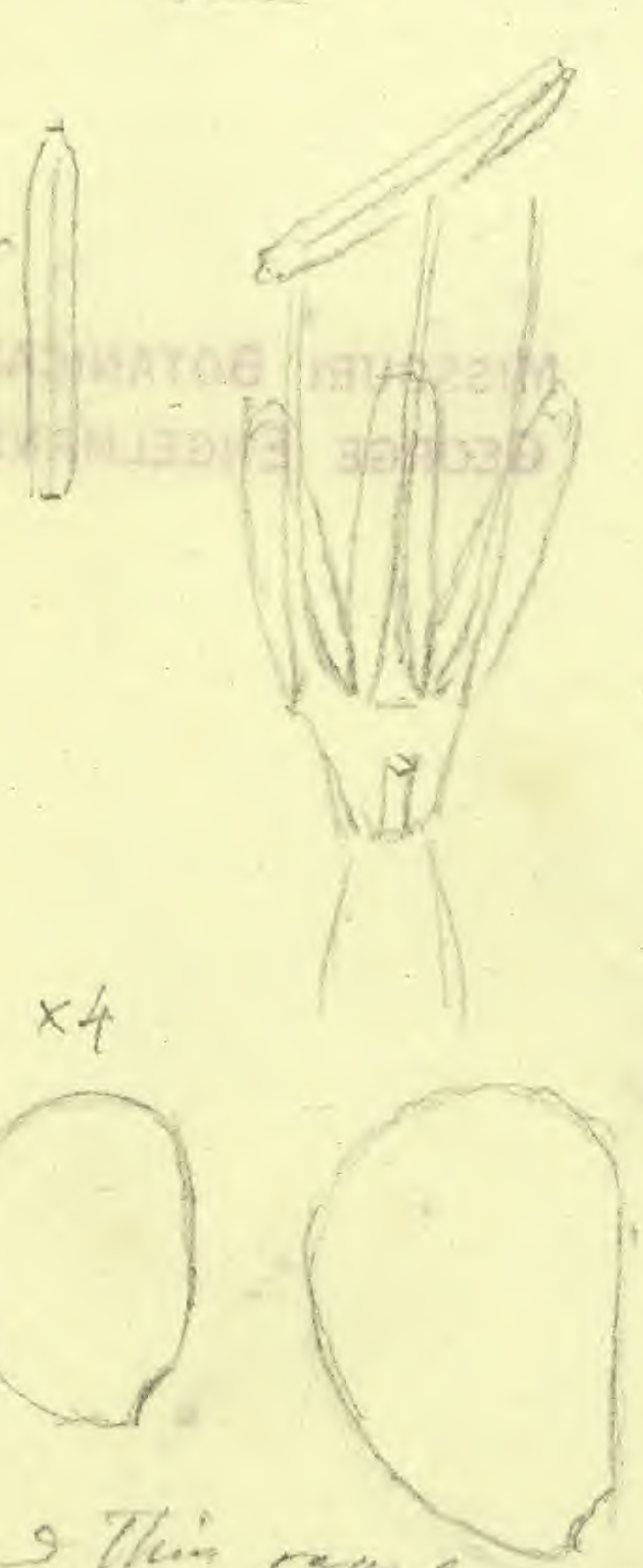
seed flowers and capsules

(Orcutt)

perigone 23 lobes 17 mm
tube 6
ovary 30
style 42
stamens in faucet, about 13 mm beyond lobes







slender and thin capsule with small and larger seeds

flower belongs to the slender capsule

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APOTHECARY,
S. W. Corner of Second & Mulberry Streets,
ST. LOUIS, MO.

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Agave ~~[illegible]~~ Pringlei

C G Pringle writes May 22 1882;

Adult plants are 15 to 18 inches through the leafy part; leaves some 10 inches long

Certainly paniculate, the branches not more than 3 or 4 inches long, 6–10 flowers on each branch; panicle dense 15 inches long, branches close set

April 24 "The Agave grows on the central ~~[illegible]~~ California plateau at 6000 feet alt. in dense clusters; stalk 4–6 feet panicle 8 inches broad and 15 inches long, close flowered

May 1882

6908

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Missouri Weather Service, May 1882

May 1882 has been very cold, with a slight deficiency of rain at the Central Station.

The mean temp. at St. Louis has been about 60°, (59.9 at the Central Station, 59.5 at the Signal Office, and 60.7 at Engelmann's.)

The normal May temp. is 66.2. The coldest May observed by Engelmann since 1837 was also 60°, in 1867, and during that May, the rainfall was nearly twice as great as for the past month. Other cold Mays were 1838 (60°.5) and 1857 (61°.) The summers of 1838 and 1867 were very warm, while that of 1857 was below the average. No inference can be drawn from this in regard to the character of the coming summer.

The extremes of temp during May have not been very great, although the temp. has been variable. The highest max. is reported from the Signal Office at St. Louis (89°). At Centreville a min. of 30 is reported for the 10th, but all the

Correction. The tabular
1881 instead of 1882 —

Agavae cymiflorae viviparae

Agave sobolifera Salm Jacobi 121
subcaulescens, folia laete viridia nitida, 30–32 poll longa 5½–6 poll lata (5½:1)
scap. 6–7 ped. (10–12 lam)

A. Jacquiniana Gawl Jacobi 96 Weiss in pamphlet, Petersb,
caulescens; foli flavo-glaucescentia, 36 poll longa 5 poll lata (7:1)
scap. 12 ped

A. ~~Theometl~~ Jacquini Jacobi 70
Caulescens. folia crassa pallide viridia 18 pollicem (4½:1) 4 poll lata
scap. 5–6 ped.

A. rigida Mill Jacobi 94 Fourcroya Haw – Kth.
caulescens, folia glaucescentia linear-lanceolata 15 poll longa, 1½ poll lata (10:1) scapus 9–10 ped

A. vivipara Lin Jacobi 131
acaulis, folia pallide viridia pruinosa, 18 poll long. 4–5 poll lata (4:1)
scapus 10–12 ped

A. Ixtli Hort Thuret

Of all the viviparous species, hitherto described, A. rigida corresponds best with the Yucatan plant in leaf shape.

The below mentioned species have similar leaves, inflorescence unknown,

(Agave Sisalana Perrine has by Perrine and Parry's account
leaves 5 feet long and 3–5 inches wide,
proportion of length to breadth = 12–20 : 1
only A. angustifolia (or rigida) is similar 10:1 fide Jacobi

A. fourcroydes Jacobi 107 acaulis leaves glaucous 4½ feet long 4½ inches wide (12:1)
stout scarcely channeled terminal spine

A. elongata, Jacobi 108 caulescens, pale glaucous, 2½–3 feet long,
2 inches wide – therefore 15–18 : 1 length to width; but
stout spine grooved.

A Ixtli Karw. Jacobi 95 from Yucatan! subcaulescens, folia
linear-lanceolata rigidissima, aculeo terminali conoideo (nec subulato!), glaucescentia
dentibus parvulis brunneis — leaves 15" by 1½ (therefore 10:1

A. Karwinskii Zucc. Jacobi 93 caulescent, leaves 15" by 1–1½ (10–12:
terminal spine not grooved, decurrent. – leaves bright green.
marginal spines upwards ~~often~~ wanting; Zuccarini Jacobi ex Kunth ~~"fol. superne integris"~~

8070

THE
George Engelmann
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